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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/806,601

03/23/2004

Pradeep J. Iyer

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04/08/2008

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EXAMINER

RIYAMI, ABDULLA A

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

04/08/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/806,601	IYER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	ABDULLAH RIYAMI	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 13 and 15-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13 and 15-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. Claims 13 and 15-17 are rejected under 35 U.S.C. 103 as being unpatentable over Eran et al. (US 2004/0063455 A1) in view of Lee et al. (US 2004/0039817).

As per claim 13, Eran et al. teaches of a method comprising: computing a RSSI value for a management message by a plurality of access points detecting the management message, the management message originating from a station (see paragraphs 48-59 and figures 1-3).

Eran et al. does not expressly disclose setting a plurality of received signal strength indicator (RSSI) thresholds including a first RSSI threshold and a second RSSI threshold having a value lower than the first RSSI threshold; and placing an address of the station into a list identifying stations located in a potential coverage hole if none of the plurality of access points computes a RSSI value of the management message above the second RSSI threshold; removing the address of the station from the list if one of the plurality of access points computes the RSSI value of the management message above the first RSSI threshold.

Lee et al. discloses a method comprising, setting a plurality of received signal strength indicator (RSSI) thresholds including a first RSSI threshold and a second RSSI threshold having a value lower than the first RSSI threshold (see abstract, paragraphs 9–10, 43 and claim 1); and placing an address of the station into a list identifying stations located in a potential coverage hole if none of the plurality of access points computes a RSSI value of the management message above the second RSSI threshold (see paragraph 11, (if it is not accepted, then by convention, it is normal to place it into a

list, table, or ignoring it) paragraphs 9–10, 43 and claim 1); removing the address of the station from the list if one of the plurality of access points computes the RSSI value of the management message above the first RSSI threshold (see paragraphs 9–10, 43 and claim 1).

Eran et al. and Lee et al. are analogous art because they are from the same field of endeavor of transmitting and receiving management frames and measuring and recording their signal strengths.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Lee et al.'s technique for of having thresholds to calculate signal strengths (see paragraphs 9–10, 43 and claim 1) in Eran et al. switch (figure 1, manager 30) and table (see paragraph 59).

The motivation to combine would have been to have an overall savings in bandwidth resulting from setting threshold levels for the signals received from mobile stations via access points, whereby signals above the threshold are allowed to pass through while signal levels below threshold are not, resulting in more efficient network bandwidth utilization and improved performance.

As per claim 15, Eran et al. teaches of a method, computing a RSSI value for a management message by a plurality of access points detecting the management message, the management message originating from a station (see paragraphs 48-59), but does not expressly disclose the first RSSI threshold is greater than or equal to 20 dbm0 and the second RSSI threshold is less than 20 dbm0.

Lee et al. discloses a method wherein the first RSSI threshold is greater than or equal to 20 dbm0 and the second RSSI threshold is less than 20 dbm0 (see paragraph 9-10, 43 and claim 1, signal level can be within any range as specified by wireless communication standards).

Eran et al. and Lee et al. are analogous art because they are from the same field of endeavor of transmitting and receiving management frames and measuring and recording their signal strengths.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Lee et al.'s technique for of having thresholds to calculate signal strengths (see paragraph 9-10, 43 and claim 1) in Eran et al. switch (figure 1, manager 30) and table (see paragraph 59).

The motivation to combine would have been to have an overall savings in bandwidth resulting from setting threshold levels for the signals received from mobile stations via access points, whereby signals above the threshold are allowed to pass through while signal levels below threshold are not, resulting in more efficient network bandwidth utilization.

As per claims 16 and 17, Eran et al. teaches of a method, computing a RSSI value for a management message by a plurality of access points detecting the management message, the management message originating from a station (see paragraphs 48-59), where the station fails to complete association with any of the plurality of access points (see paragraph 48), and where the station continues to provide management messages with RSSI values below the second RSSI threshold

(see paragraph 48), but does not expressly disclose initiating an event to mitigate a coverage hole.

Lee et al. discloses a method of initiating an event to mitigate a coverage hole (see paragraph 9-10, 43 and claim 1 and paragraph 11 (none is selected, meaning that there is a coverage hole (bad signal strength))).

Lee et al. and Eran et al. are analogous art because they are from the same field of endeavor of transmitting and receiving management frames and measuring and recording their signal strengths.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Lee et al.'s technique for of having thresholds to calculate signal strengths (see paragraph 9-10, 43 and claim 1 and paragraph 11) in Eran et al. switch (figure 1, manager 30) and table (see paragraph 59).

For claims 16-17, the motivation to combine would have been to have an overall savings in bandwidth resulting from setting threshold levels for the signals received from mobile stations via access points, whereby signals above the threshold are allowed to pass through while signal levels below threshold are not, resulting in more efficient network bandwidth utilization.

### ***Response to Arguments***

5. Applicant's election with traverse of restriction in the reply filed on 02/25/2008 is acknowledged. The traversal is on the ground(s) that it is no longer a serious burden to examine all inventions in the single application. This is not found persuasive because further examination of the claims 1-19 is required since the previous office action is

withdrawn upon further reconsideration with Primary examiners. It is a serious burden on the examiner since the claimed subject matter support separate patents. Claims 1-6 and 20 are drawn to the validity of management frames such as deauthentication messages in a wireless network. Claims 7-12 are drawn to probe request identification and modification in a wireless network. Claims 13-17 are drawn to setting up a plurality of RSSI thresholds in a wireless network. Claims 18-19 are drawn to creating and providing an access point list to a requesting device in a wireless network.

The inventions are distinct, each from the other because of the following reasons:

Inventions I., II., III. and IV. are directed to related different functionality and inventive concepts. The related inventions are distinct if the (1) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect; (2) the inventions do not overlap in scope, i.e., are mutually exclusive; and (3) the inventions as claimed are not obvious variants. See MPEP § 806.05(j). In the instant case, the inventions as claimed different functions and inventive concepts. Furthermore, the inventions as claimed do not encompass overlapping subject matter and there is nothing of record to show them to be obvious variants.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See form 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ABDULLAH RIYAMI whose telephone number is



Art Unit: 2616

(571)270-3119. The examiner can normally be reached on Monday through Thursday 8am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on (571)272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Abdullah Riyami/  
Examiner, Art Unit 2616

/FIRMIN BACKER/  
Supervisory Patent Examiner, Art Unit 2616